



## DEPARTMENT OF COMMERCE

### Submission for OMB Review; Comment Request

The Department of Commerce will submit to the Office of Management and Budget (OMB) for clearance the following proposal for collection of information under the provisions of the Paperwork Reduction Act (44 U.S.C. chapter 35).

*Agency:* U.S. Census Bureau.

*Title:* Business Research & Development and Innovation Survey.

*OMB Control Number:* 0607-0912.

*Form Number(s):* BRDI-1 and BRD-1S.

*Type of Request:* Revision of a currently approved collection.

*Number of Respondents:* 45,000.

*Average Hours Per Response:* BRDI-1 – 14.85 hours; BRD-1(S) –.59 hours.

*Burden Hours:* 126,500.

*Needs and Uses:* Companies are the major performers of research and development (R&D) in the United States (U.S.), accounting for over 70 percent of total U.S. R&D outlays each year. A consistent business R&D information base is essential to government officials formulating public policy, industry personnel involved in corporate planning, and members of the academic community conducting research. In order to develop policies designed to promote and enhance science and technology, past trends and the present status of R&D must be known and analyzed. Without comprehensive business R&D statistics, it would be impossible to evaluate the health of science and technology in the United States or to make comparisons between the technological progress of our country and that of other nations.

The National Science Foundation Act of 1950 as amended authorizes and directs National Science Foundation (NSF) “...to provide a central clearinghouse for the collection, interpretation, and analysis of data on scientific and engineering resources and to provide a source of information for policy formulation by other agencies of the Federal government.”

One of the methods used by the NSF to fulfill this mandate is The Business R&D and Innovation Survey (BRDIS)—the primary federal source of information on R&D in the business sector. The NSF together with the Census Bureau, the collecting and compiling agent, analyze the data and publish the resulting statistics.

The NSF has published annual R&D statistics collected from the Survey of Industrial Research and Development (SIRD) (1953 – 2007) and BRDIS (2008 – 2013) for 60 years. The results of the survey are used to assess trends in R&D expenditures by industry sector, investigate productivity determinants, formulate science and tax policy, and compare individual company performance with industry averages. This survey is the Nation's primary source for international comparative statistics on business R&D spending.

The BRDIS will continue to collect the following types of information:

- R&D expense based on accounting standards.
- Worldwide R&D of domestic companies.
- Business segment detail.
- R&D related capital expenditures.
- Detailed data about the R&D workforce.
- R&D strategy and data on the potential impact of R&D on the market.
- R&D directed to application areas of particular national interest.
- Data measuring innovation, and intellectual property protection activities.

The following changes were made to the 2014 BRDIS from the 2013 BRDIS.

- Section 1: Moved foreign ownership question up above ownership question.

Changed the EIN of owner to the ownership question instead of the foreign ownership question.

- Section 2: Added some questions to gather data on monetary gifts to

academia.

- Section 6: Added a question on revenue from sale of patents. Added two questions in regards to how much the company paid others to purchase patents or license patents. Removed the question on how many agreements company entered into.

Information from the BRDIS will continue to support the following initiatives:

Science of Science and Innovation Policy (SciSIP), the NSF's program to foster the development of the knowledge, theories, data, tools, and human capital needed to underwrite fundamental research that creates new explanatory models and analytic tools designed to inform the Nation's public and private sectors about the processes through which investments in science and engineering are transformed into social and economic outcomes.

America Competes Act of 2007, which calls for the doubling of funding for basic research in physical sciences, improvement of math instruction, and expansion of low-income students' access to Advance Placement (AP) coursework through AP/International

Baccalaureate Program to, as The White House fact sheet on the America Competes Act says, “encourage scientists to explore promising and critical areas such as nanotechnology, supercomputing, and alternative energy sources.”

Rising Above the Gathering Storm, the National Research Council (NRC) report that recommends increasing America’s talent pool by improving K-12 math and science education; sustaining and strengthening the Nation’s commitment to long-term basic research; developing and recruiting top students, scientists and engineers from U.S. and abroad; and ensuring that the U.S. is the premier place in the world for innovation.

Policy officials from many Federal agencies rely on these statistics for essential information. For example, total U.S. R&D expenditures statistics have been used by the Bureau of Economic Analysis (BEA) to update the System of National Accounts and, in fact, the BEA recently has incorporated R&D as a direct component of the System.

Accurate R&D data are needed to continue the development and subsequent updates to this detailed satellite account. Also, a data linking project has been designed to augment

the Foreign Direct Investment (FDI) data collected by BEA. The initial attempt to link the SIRD data with BEA's FDI benchmark files was successful, and plans now call for the annual linkage of the R&D data to the FDI and U.S. Direct Investment Abroad (USDIA) data. Further, the Census Bureau links data collected by the Survey with other statistical files. At the Census Bureau, historical company-level R&D data are linked to a file that contains information on the outputs and inputs of companies' manufacturing plants. Researchers are able to analyze the relationships between R&D funding and other economic variables by using micro-level data.

Individuals and organizations access the survey statistics via the Internet in annual National Center for Science and Engineering Statistics (NCSES) InfoBriefs that announce the availability of statistics from each cycle of the Survey and provide detailed statistical table reports that contain all of the statistics the NSF produces from the Survey. Information about the kinds of projects that rely on statistics from the Survey is available from internal records at the NSF's NCSES. In addition, survey statistics are regularly cited

in trade publications and many researchers use the survey statistics from these secondary sources without directly contacting the NSF or the Census Bureau. Some of the users of the survey statistics and the types of information they request are described below.

#### Government Users

Government policy officials who are involved in assessing the role of the Federal government in promoting economic growth use R&D statistics in their decision-making processes since R&D results affect technological and economic progress. Members of Congress make extensive use of R&D statistics in preparing tax legislation, contacting the NSF or the Census Bureau directly through their own staffs, one of the House or Senate science committees, or the Congressional Research Service.

The NSF staff also work closely with the Office of Science and Technology Policy (OSTP), providing R&D statistics and indications of emerging trends to assist the OSTP staff in their analyses of the status of science and technology in the United States. In addition, the NSF has frequent contact with the Office of Management and Budget (OMB),



the Congressional Budget Office (CBO), the Congressional Research Service (CRS), and the Congressional Joint Economic Committee which use R&D statistics in their studies.

Statistics produced from the Survey also have been requested by officials from other Federal government and quasi-governmental agencies including the Departments of Agriculture, Commerce, Defense, Education, Energy, Health and Human Services, Labor, State, Treasury; the Bureau of Economic Analysis; Bureau of Labor Statistics (BLS); Congressional Joint Committee on Taxation; Consumer Products Safety Commission; Environmental Protection Agency; Federal Reserve Banks of Chicago, Dallas, New York, and San Francisco; Government Accountability Office; Government Printing Office; International Trade Administration; International Trade Commission; National Aeronautics and Space Administration; National Institute of Standards and Technology; National Institutes of Health; National Oceanic and Atmospheric Administration; Oakridge National Laboratory; Office of Naval Research; President's Council of Economic Advisors; Office of Trade Policy Analysis; U.S. Federal Trade Commission; U.S. Patent Office; and U.S. Small

Business Administration.

As states and local governments seek to attract high-tech industries to their areas, the NSF and the Census Bureau are frequently asked to provide R&D funding and employment figures. Among the state governments and state organizations requesting industry R&D statistics have been Alabama, Arkansas, California Energy Commission, Center for Innovative Technology (VA), Georgia, Indiana, Maine Development Foundation, Maine Science and Technology Foundation, Maryland, Massachusetts Department of Revenue, Michigan Department of Labor and Economic Growth, Michigan Economic Development Corporation, Minnesota, Mississippi, New Jersey Research and Development Council, New York State Department of Taxation and Finance, New York State Economic Development Authority, North Carolina, North Dakota Department of Commerce, Ohio, Oklahoma, Pennsylvania, South Carolina, Southern Growth Policies Board (representing Alabama, Arkansas, Georgia, Kentucky, Louisiana, Missouri, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Virginia, and West Virginia), and Utah.

Information and statistics from the Survey also are supplied to the NSF internal organizations. For example, survey statistics are used in the "Research and Development: National Trends and International Linkages" and "Industry, Technology, and the Global Marketplace" chapters of the Congressionally mandated Science and Engineering Indicators series, a biennial report in which the National Science Board continues its effort to describe quantitatively the condition of U.S. science and research. Survey results are also included in the NSF's annual National Patterns of R&D Resources tabulations.

#### International Users

The international community uses R&D spending information as part of its comparisons of the economic performance among nations. U.S. R&D statistics are compiled in a format that can be compared with those of other countries. These statistics are transmitted to the Organization for Economic Cooperation and Development (OECD) that relies on the Survey as its primary source for business R&D statistics for the United States. Also, R&D statistics are used by multi-national committees and subcommittees

studying and maintaining the North American Industry Classification System (NAICS) and North American Product Classification System (NAPCS).

Other international and foreign entities that have requested statistics on U.S. business R&D expenditures include the Brazilian National Council for Scientific and Technological Development, Canadian Ministry of Treasury and Economics, Delegation of the European Communities, Department of State and Regional Development (Australia), Department of Technology Policy (Austria), European Commission's Joint Research Center, French Embassy, French Federal Institute of Research, Embassy of Finland, Embassy of Germany, Hungarian Academy of Sciences, , Industry Canada, Instituto Nacional de Estadística (Madrid), National Technology Agency of Finland, Natural Sciences and Engineering Research Council of Canada, Puerto Rico Planning Board, Office of the Representative of the Republic of Taiwan, Statistics Canada, and Statistics Quebec.

#### Business Users

Although the primary purpose of the survey is to provide accurate R&D statistics for

well-informed public policy decisions, business users also benefit from the survey figures, and one of the goals of the redesign is to increase the utility of the information for companies. There is a special obligation to keep the survey relevant to industry users particularly because business personnel spend time answering the annual questionnaire. Firms and trade associations in all industries, whether large or small in terms of R&D performance, are interested in making intra-industry comparisons, as well as comparing other industries' performance with their own.

Each year the NSF and Census Bureau receive many requests for R&D information from business users. Some of the industries where users who have requested information are aerospace, telecommunications, healthcare, pharmaceuticals, chemicals, software, and motor vehicles.

In addition to industry researchers who utilize the R&D statistics directly from the NSF website and publications, there are many who use the Survey's tabulations in their

own trade reports.

Other trade publications that regularly print statistics directly from the Survey include multiple Fortune 500 companies and various trade associations.

Unions also consider business R&D statistics relevant to their members' well-being. R&D statistics also are used by research organizations devoted to the study of industry, R&D, science and technology and related topics.

#### Other Users

Research undertaken at universities on innovation and economic growth has relied heavily on the detailed R&D time series from the Survey. Research projects that have used R&D statistics obtained from the Survey have been conducted at many colleges and universities.

In addition, inquiries are regularly received from the news media. And finally, Internet sites continue to link with the Survey's results.

In summary, each item in the Survey has been the subject of research by someone

interested in business R&D performance. Although the consumers of the R&D statistics from the Survey are diverse, there is one common element underlying all the uses of the survey statistics—an attempt to gain a better understanding of some aspect of the nation's scientific and technological resources. The detailed statistics provided by the Survey are the most complete set of elements for assessing the impact of R&D on business development and the nation's economy.

The total burden estimate for the 2014 BRDIS has increased due to an increase in amount of companies that are receiving the longer Form BRDI-1 from 3,000 to 7,000.

The increase in the number of companies receiving form BRDI-1 is the result of lowering the R&D threshold for receiving the longer form from \$7 million to \$1 million. At the same time the burden on companies receiving the shorter form has been reduced. Prior to 2012 the shorter form (then called Form BRDI-1A) was 32 pages (168 response fields). The current shorter form (Form BRD-1S) is 8 pages (61 response fields).

The increase in burden also reflects a slight increase in the total number of

companies in the sample from the prior OMB submission.

*Affected Public:* Business or other for-profit.

*Frequency:* Annually.

*Respondent's Obligation:* Mandatory.

*Legal Authority:* Title 13 U.S.C., Sections 182, 224 and 225; NSF Act of 1950.

This information collection request may be viewed at [www.reginfo.gov](http://www.reginfo.gov). Follow the instructions to view Department of Commerce collections currently under review by OMB.

Written comments and recommendations for the proposed information collection should be sent within 30 days of publication of this notice to

[OIRA\\_Submission@omb.eop.gov](mailto:OIRA_Submission@omb.eop.gov) or fax to (202)395-5806.

Dated: April 17, 2015

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